What is Claimed is:

1. A method of forming light extraction features for a light emitting device having a substrate and a semiconductor light emitting element on the substrate, comprising:

shaping a surface of a semiconductor layer of the light emitting device utilizing a laser to define three dimensional geometric patterns in the layer.

2. The method of Claim 1, wherein the semiconductor layer comprises a layer of the light emitting element.

3. The method of Claim 1, wherein the semiconductor layer comprises a contact layer of the light emitting element.

4. The method of Claim 1, wherein the semiconductor layer comprise the substrate of the light emitting device.

5. The method of Claim 4, wherein the substrate comprises a silicon carbide substrate.

6. The method of Claim 4, wherein the substrate comprises a sapphire substrate.

7. The method of Claim 1, wherein shaping a surface of a semiconductor layer comprises applying laser light to the semiconductor at an energy sufficient to remove material from the semiconductor layer.

8. The method of Claim 2, wherein applying laser light to the semiconductor layer is followed by etching the semiconductor layer.

9. The method of Claim 8, wherein etching the semiconductor layer comprises anisotropically etching the semiconductor layer.

10. The method of Claim 7, wherein applying laser light to the semiconductor layer comprises:

applying laser light to the semiconductor layer using mask projection optics that applies the light in a predefined mask pattern to the semiconductor layer; and

stepping the mask pattern to different regions of the semiconductor layer to provide a plurality of the three dimensional geometric patterns.

11. The method of Claim 7, wherein the laser light comprises light from an excimer laser operating at about 308 nm.

12. The method of Claim 1, wherein a plurality of geometric patterns are provided in the surface of the semiconductor layer, the geometric patterns extending into the semiconductor layer and having uninterrupted perimeters at a same level of the semiconductor layer.

13. The method of Claim 4, wherein the surface of the substrate is on a side of the substrate opposite the light emitting element.

14. The method of Claim 4, wherein the surface of the substrate is on a same side of the substrate as the light emitting element.

15. The method of Claim 1, shaping a surface of the semiconductor layer precedes singulation of the substrate into individual light emitting devices.

16. The method of Claim 1, wherein the three dimensional geometric patterns include parabolic features.

17. The method of Claim 1, wherein a plurality of geometric patterns are generated in the surface of the semiconductor layer, the plurality of geometric patterns including a plurality of different geometric patterns.

18. The method of Claim 1, wherein the geometric patterns provide a curved substrate.

19. The method of Claim 1, wherein the geometric patterns comprise lenses formed in the semiconductor layer.

20. The method of Claim 1, wherein the geometric patterns comprise a plurality of sinusoidal grooves in the semiconductor layer.

21. The method of Claim 1, wherein the geometric patterns comprise randomization features formed in the semiconductor layer.

22. The method of Claim 1, wherein shaping a surface of a semiconductor layer utilizing a laser to define three dimensional geometric patterns in the semiconductor layer comprises:

patterning a mask layer on the semiconductor layer using a laser; and

etching the semiconductor layer using the patterned mask layer to define the three dimensional geometric patterns.

23. The method of Claim 22, wherein the mask is a polymer mask.

24. The method of Claim 22, wherein patterning a mask layer on the semiconductor layer using a laser comprises patterning a mask layer on the semiconductor layer using a laser to remove mask material.

25. The method of Claim 22, wherein patterning a mask layer on the semiconductor layer using a laser comprises:

patterning a master template with a laser; and

embossing the mask layer using the master template.

26. The method of Claim 4, further comprising forming the light emitting element on the substrate.

27. The method of Claim 26, wherein forming the light emitting element is carried out subsequent to shaping the surface of the substrate.

28. A light emitting device, comprising:

a silicon carbide substrate having at least one surface having a three dimensional geometric pattern extending into the substrate from the at least one

surface, the geometric pattern having at least one curved feature and having an uninterrupted periphery at the at least one surface; and

a light emitting element on the substrate.

29. The light emitting device of Claim 28, wherein the curved feature is a portion of a perimeter of the feature.

30. The light emitting device of Claim 28, wherein the curved feature is a parabolic feature.

31. The light emitting device of Claim 28, wherein the curved feature provides a lens.

32. The light emitting device of Claim 28, wherein the light emitting element is provided on the at least one surface of the substrate.

33. The light emitting device of Claim 28, wherein the light emitting element is provided on a surface of the substrate opposite the at least one surface of the substrate.

34. A light emitting device, comprising:

a substrate having at least one surface having a plurality of three dimensional geometric patterns therein, the plurality of geometric patterns including different geometric patterns; and

a light emitting element on the substrate.

35. The light emitting device of Claim 34, wherein the light emitting element is provided on the at least one surface of the substrate.

36. The light emitting device of Claim 34, wherein the light emitting element is provided on a surface of the substrate opposite the at least one surface of the substrate.

37. The light emitting device of Claim 34, wherein the substrate is a silicon carbide substrate.

38. The light emitting device of Claim 34, wherein the substrate is a sapphire substrate.

39. A method of fabricating a microelectronic substrate, comprising:

removing material from the microelectronic substrate utilizing a laser to define three dimensional geometric light extraction patterns in the substrate.

40. The method of Claim 39, further comprising etching the substrate subsequent to the removal of material utilizing a laser.

41. The method of Claim 39, wherein etching utilizes an anisotropic etch.

42. The method of Claim 39, wherein the microelectronic substrate comprises silicon carbide and/or sapphire.

43. The method of Claim 39, further comprising forming a light emitting element on the microelectronic substrate.

44. The method of Claim 43, wherein the light emitting element is formed on a surface of the substrate having the three dimensional geometric patterns.

45. A light emitting device, comprising:

a curved silicon carbide substrate; and

a light emitting element on the substrate.

46. A method of shaping a surface of a silicon carbide substrate, comprising:

patterning a mask layer on the silicon carbide substrate using a laser; and

etching the silicon carbide substrate using the patterned mask layer to define the three dimensional geometric patterns.

47. The method of Claim 46, wherein the mask is a polymer mask.

48. The method of Claim 46, further comprising forming a light emitting element on the substrate.

49. The method of Claim 46, wherein a shape of the pattern of the mask layer is based on a difference between an etch rate of the silicon carbide substrate and an etch rate of the mask layer.

50. The method of Claim 46, further comprising forming a micro-mask between the mask layer and the silicon carbide substrate, the micro-mask being configured to roughen a surface of the substrate during etching.

51. The method of Claim 50, wherein the micro-mask comprises an aluminum layer between the mask layer and the substrate.

52. The method of Claim 46, wherein the three dimensional geometric patters comprise a plurality of different geometric patterns.

53. The method of Claim 52, wherein the plurality of different geometric patters are provided in a single etch and in a single patterning of the mask layer.

54. The method of Claim 46, wherein patterning a mask layer on the silicon carbide substrate using a laser comprises patterning a mask layer on the silicon carbide substrate using a laser to remove material from the mask layer.

55. The method of Claim 46, wherein patterning a mask layer on the semiconductor layer using a laser comprises:

patterning a master template with a laser; and

embossing the mask layer using the master template.

56. A method of forming light extraction features for a light emitting device having a substrate and a semiconductor light emitting element on the substrate, comprising:

blanket annealing a surface of the substrate utilizing a laser to define three dimensional features in the substrate.

57. The method of Claim 56, wherein blanket annealing a surface of the substrate comprises applying laser light to the substrate at an energy below an ablation threshold of the substrate.

58. The method of Claim 56, wherein the surface of the substrate is on a side of the substrate opposite the light emitting element.

59. The method of Claim 56, wherein the substrate is a silicon carbide substrate.

60. The method of Claim 56, wherein the substrate is a sapphire substrate.

61. The method of Claim 56, wherein blanket annealing comprises:

blanket annealing a first region of the substrate; and then

blanket annealing a second region of the substrate, different from the first region of the substrate.

62. The method of Claim 56, wherein the three-dimensional features are in a substantially random pattern.

63. A light emitting device, comprising:

a substrate having an agglomerated surface; and

a light emitting element on the substrate.

64. The light emitting device of Claim 63, wherein the substrate comprises a silicon carbide substrate.

65. The light emitting device of Claim 63, wherein the substrate comprises a sapphire substrate.

66. A method of fabricating a light emitting device having a substrate and a semiconductor light emitting element on the substrate, the light emitting element having a plurality of layers of semiconductor material, comprising:

patterning a surface of at least one of the layers of semiconductor material utilizing a laser.

67. The method of Claim 66, wherein the at least one of the layers of semiconductor material comprises a contact layer.

68. The method of Claim 66, wherein patterning a surface comprises applying laser light to the at least one layer of semiconductor material at an energy sufficient to remove material from the at least one layer of semiconductor material.

69. The method of Claim 66, wherein patterning a surface comprises:

patterning a mask layer on the at least one layer of semiconductor material using a laser; and

etching the at least one layer of semiconductor material using the patterned mask layer.

70. The method of Claim 69, wherein patterning a mask layer on the at least one layer of semiconductor material using a laser comprises patterning a mask layer on the at least one layer of semiconductor material using a laser to remove material from the mask layer.

71. The method of Claim 69, wherein patterning a mask layer comprises:

patterning a master template with a laser; and

embossing the mask layer using the master template.

72. The method of Claim 66, wherein patterning a surface comprises laser blanket annealing a surface of at least one layer of semiconductor material.

73. The method of Claim 72, wherein laser blanket annealing is carried out at an energy of less than an ablation threshold of the at least one layer of semiconductor material.

74. A semiconductor device, comprising:

a substrate; and

a semiconductor light emitting element on the substrate, the light emitting element comprising a plurality of layers of semiconductor material wherein at least one of the layers of semiconductor material is patterned to provide light extraction features in the at least one of the layers of semiconductor material.